

The following publications have been cited in this document:

- [1] Terabe, K. et al. (2001) "Quantum point contact switch realized by solid electrochemical reaction", RIKEN Review, Focused on Nanotechnology in RIKENI, No. 37, pages 7-8
- [2] Haag, R. et al. (1999) "Electrical Breakdown of Aliphatic and Aromatic Self-Assembled Monolayers Used as Nanometer-Thick Organic Dielectrics", JAmChemSoc 121:7895-7906
- [3] Hofmann, F. et al. (2001) "Surrounding Gate Selector Transistor for $4F^2$ Stacked Gbit DRAM", ESSDERV European Solid State Device Research Conference, September 2001
- [4] US 5,761,115
- [5] US 5,914,893
- [6] US 5,896,312
- [7] US 6,084,796
- [8] US 6,348,365
- [9] US 6,391,688
- [10] US 6,418,049
- [11] US 2002/0168 820 A1
- [12] Kohlrausch, F. (1985) "Praktische Physik" [Practical Physics], vol. 2, 23rd edition, Teubner Verlag Stuttgart, pages 31-32

List of reference symbols

| | |
|-----|------------------------------------|
| 100 | First experimentation arrangement |
| 101 | Platinum substrate |
| 102 | Silver sulfide tip |
| 103 | First voltage |
| 104 | Quantum point contact |
| 110 | Second experimentation arrangement |
| 111 | Second voltage |
| 200 | Graph |
| 201 | Abscissa |
| 202 | Ordinate |
| 300 | Layer sequence |
| 301 | Silicon substrate |
| 302 | Silicon oxide layer |
| 303 | Photoresist |
| 304 | Gold material |
| 305 | Trench |
| 310 | Layer sequence |
| 311 | Gold electrode |
| 312 | SAM layer |
| 313 | Chalcogenide electrode |
| 320 | Layer sequence |
| 321 | Cavity |
| 330 | Layer sequence |
| 400 | Memory cell arrangement |
| 401 | Gold bit lines |
| 402 | Chalcogenide word lines |
| 500 | Memory cell |
| 501 | First electrode |
| 502 | Second electrode |
| 503 | Cavity |
| 504 | First source/drain region |
| 505 | Second source/drain region |
| 506 | Surrounded gate region |
| 600 | Memory cell |
| 601 | First chalcogenide electrode |
| 602 | Second chalcogenide electrode |

603 Silver electrode

604 Bridging structure